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EPIDEMIOLOGY

Sexual Activity is Associated with Greater Enjoyment of Life in Older Adults



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ABSTRACT

Background: Relationships among sexual activity, problems and concerns, and well-being among older adults have not been fully explored.

Aim: To investigate associations among sexual activity, problems and concerns, and experienced well-being in a representative sample of older adults.

Methods: In this cross-sectional analysis from the English Longitudinal Study of Ageing, sexual behavior, problems, and concerns were assessed via a self-completed questionnaire. Covariates included age, partnership status, socioeconomic status, smoking status, alcohol intake, limiting long-standing illness, and depressive symptoms. Data were analyzed using 1-way independent analysis of variance.

Main Outcome Measure: Enjoyment of life was assessed with the pleasure subscale of the CASP-19 (Control, Autonomy, Self-realization, and Pleasure), a validated measure of quality of life specific to older age.

Results: Data on sexual activity and enjoyment of life were available for a total of 3,045 men and 3,834 women (mean age 64.4 years in men and 65.3 years in women). Men and women who reported any sexual activity in the past year had significantly higher mean enjoyment of life scores compared with those who were not sexually active (men, 9.75 vs 9.44 [$P < .001$]; women, 9.86 vs 9.67 [$P = .003$]). Among sexually active men, frequent (≥ 2 times a month) sexual intercourse ($P < .001$) and frequent kissing, petting, or fondling ($P < .001$) were associated with greater enjoyment of life. Among sexually active women, frequent kissing, petting, or fondling was also associated with greater enjoyment of life ($P < .001$), but there was no significant association with frequent intercourse ($P = .101$). Concerns about one's sex life and problems with sexual function were strongly associated with lower levels of enjoyment of life in men and to a lesser extent in women.

Conclusion: This is among the first studies to show that well-being is higher among older adults when they are sexually active. Preferences regarding the expression of sexual activity differed between the sexes. Further longitudinal research is needed to confirm a causal association between sexual activity and well-being. **Smith L, Yang L, Veronese N, et al. Sexual Activity is Associated with Greater Enjoyment of Life in Older Adults. Sex Med 2019;7:11–18.**

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Key Words: Sexuality; Sexual Activity; Well-Being; Enjoyment of Life; Older Adults

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INTRODUCTION

Research has shown that subjective well-being is associated with a number of favorable health outcomes in older adults, as well as with reduced mortality.¹ Owing to such clear and compelling evidence, promoting subjective well-being has been identified as an important strategy for promoting public health in various governmental and organizational policies.^{2,3} Subjective well-being encompasses multiple aspects, including experienced well-being (positive feelings, eg, pleasure and happiness, and negative feelings, eg, distress), evaluative well-being (overall life satisfaction), and eudemonic well-being (judgments about the meaning and purpose in life).⁴

Experienced well-being, the most widely studied aspect, is typically conceptualized as positive psychological well-being, happiness, or optimism. In a meta-analysis conducted a decade ago, positive psychological well-being was associated with a 28% reduction in mortality in healthy individuals (combined hazard ratio, 0.82; 95% CI, 0.76–0.89; $P < .001$).⁵ More recent studies have shown measures of positive affect, enjoyment of life, happiness, and optimism to be protective against the risk of incident coronary heart disease⁶ and to reduce the risk of mortality by up to 35%.^{7–11}

To understand how we might effectively promote well-being in later life, it is important to identify and understand its correlates. A wide range of factors have been associated with well-being in older age, including fostering and maintaining “noncognitive” life skills such as persistence and conscientiousness,¹² social support and interaction with friends,^{13,14} religion and spirituality,¹⁵ and better mobility status.¹⁶ Although important, these factors may not be amenable to change.

A factor that may prove to be a promising modifiable target for well-being in older age is sexual activity. Sexual health is defined by the World Health Organization as “a state of physical, emotional, mental, and social well-being related to sexuality, not merely the absence of disease dysfunction or infirmity.”¹⁷ Sexual activity is a central component of intimate relationships but has been shown to decline with age. In a population-based study of English adults, sexual activity was found to decrease substantially from age 50–59 years to age ≥ 80 years in both men (from 94.1% to 31.1%) and women (from 53.7% to 14.2%).¹⁸ A similar trend and magnitude of decline were also observed in a U.S. population-based study.¹⁹

Several studies have suggested that frequent sexual intercourse (defined in this study as ≥ 2 times a month), 1 aspect of sexual activity, is associated with a range of benefits for psychological and physiological well-being, such as improved quality of life and mental health, increased heart rate variability, and lower risk of certain cancers and fatal coronary events.^{1,20–24} Strikingly, a “positive sex life” (defined based on frequency of intercourse in men and enjoyment of intercourse in women) has been associated with a lower annual death rate.²⁵

It is important to note that although the frequency of sexual activity declines as people age, older adults are not asexual and

have sexual interest.^{26,27} The benefits of sexual activity may be particularly relevant for older adults, given that mental and physical health complications may increase with age^{28,29} and tend to be negatively associated with well-being.^{30,31} Should an association between sexual activity and well-being in later life be identified, there would be considerable potential to improve the well-being of older adults by supporting them in achieving and maintaining an active sex life. It is plausible that a frequent and problem-free sex life may be associated with higher levels of experienced well-being in older adults; however, to our knowledge, this has not yet been empirically evaluated.

The aim of the present study was therefore to investigate the associations between sexual activity, problems, and concerns with experienced well-being, measured as enjoyment of life, in a large, population-based sample of older adults. It was hypothesized that engagement in sexual activity and fewer sexual problems and concerns would be associated with higher levels of experienced well-being.

MATERIALS AND METHODS

Study Population

Our data were drawn from the English Longitudinal Study of Ageing (ELSA), a longitudinal panel study of men and women age ≥ 50 years living in private households in England initiated in 2002. Full methodological details have been published elsewhere.³² In brief, ELSA participants take part in biennial assessments that include a computer-assisted personal interview and self-completed questionnaires. Comparisons of the socio-demographic characteristics of participants against results from the English national census indicate that the sample is representative of the population.³²

In ELSA wave 6 (in 2012–2013), the self-completion measures administered to participants included a Sexual Relationships and Activities Questionnaire (SRA-Q), which was returned by 7,079 participants (67% of those eligible). In the present analyses, we used these data in addition to data on enjoyment of life, which was also assessed in wave 6. A total of 40 individuals who did not respond to a question asking about engagement in sexual activity over the last year were excluded, as were 170 who had missing data on enjoyment of life, leaving a final analytic sample of 6,869 men and women. All participants provided full informed consent to participate in the study, and ethical approval was obtained from the London Multi-Centre Research Ethics Committee.

SRA-Q

The SRA-Q has been described in detail previously.¹⁸ Sex-specific versions of the questionnaire were developed based on previously validated measures, with some modifications made to ensure that the data obtained were comparable with the National Survey of Sexual Attitudes and Lifestyles in the United Kingdom³³ and the National Social Life, Health and Aging

Study in the United States.³⁴ The SRA-Q captures data on a broad range of aspects of sexuality, including frequency of sexual activities (sexual intercourse, masturbation, kissing, petting, or fondling), problems with sexual function, concerns about sexual activities and function, and sexual satisfaction. The versions of the SRA-Q completed by men and women in this sample are available online at <http://www.elsa-project.ac.uk/documentation>. There were no alternative versions of the questionnaire available for trans/gender-nonconforming/gender-fluid persons. To provide assurance of full anonymity of responses, the questionnaire was completed in private and returned in a sealed envelope.

Enjoyment of Life

Enjoyment of life was assessed with the pleasure subscale of the CASP-19 (Control, Autonomy, Self-realization, and Pleasure), a previously validated measure developed specifically to assess quality of life in old age.³⁵ This instrument has been used to assess the relationship between subjective well-being and mortality in the ELSA.^{7,36} The pleasure subscale asks respondents to indicate their agreement with 4 statements: (i) “I enjoy the things that I do,” (ii) “I enjoy being in the company of others,” (iii) “On balance, I look back on my life with a sense of happiness,” and (iv) “I feel full of energy these days.” Responses are recorded on a 4-point Likert scale from 0 (never) to 3 (often). Total scores range from 0 to 15, with higher scores indicating greater enjoyment of life.

Potential Confounders

All potential confounders were selected a priori. Demographic information collected included age, sex (male vs female; no other genders were included) and partnership status (married/cohabiting, separated/divorced, widowed, or single/never married). Socioeconomic status was based on household nonpension wealth, which has been shown to be a sensitive indicator in this age group,³⁷ categorized into quintiles across all ELSA participants who took part in wave 6. Descriptive data on ethnicity (white vs nonwhite [ie, black, Asian, mixed ethnic group, other]) are also presented, but ethnicity was not included as a covariate because the ELSA sample is overwhelmingly white British. Health-related covariates included self-reported limiting long-standing illness (defined as any long-standing illness, disability, or infirmity that limits activities in any way), current smoking status (smoker vs nonsmoker), and frequency of alcohol intake, categorized as never/rarely (never to once or twice a year), regularly (once every couple of months to twice a week), or frequently (3 days a week to every day or almost every day).¹⁸ Depressive symptoms were assessed using the 8-item Centre of Epidemiological Studies Depression scale, which has been validated for use in older adults.³⁸

Statistical Analysis

Secondary data analyses were performed using SPSS version 22 (IBM, Armonk, NY, USA). Data were weighted to correct for sampling probabilities and differential nonresponse and to ensure that the sample matched the 2011 National Census population

distributions for age and sex. The weights accounted for the differential probability of being included in wave 6 of the ELSA and for nonresponse to the SRA-Q. Full details of the weighting procedure are available at http://doc.ukdataservice.ac.uk/doc/5050/mrdoc/pdf/5050_elsa_w6_technical_report_v1.pdf.

1-way independent analysis of variance was used to examine the extent to which sexual activities, problems, concerns, and satisfaction were associated with enjoyment of life. Analyses were performed separately for men and women, with age, partnership status, wealth, limiting long-standing illness, smoking status, alcohol intake, and depressive symptoms entered as covariates.

RESULTS

A total of 3,045 men and 3,834 women who provided data on their sexual activity and enjoyment of life were included in the present analyses. Sample characteristics are summarized in Table 1. Participants ranged in age from 50 to 89 years (mean age, 64.4 ± 9.8 years in men and 65.3 ± 10.1 years in women). The majority were married or cohabiting with a partner (74% of men and 60% of women) and were of white ethnicity (94% of men and 96% of women). Approximately one-third of both men and women reported a limiting long-standing illness, 1 in 7 participants were smokers, and the majority (84% of men and 69% of women) were regular alcohol drinkers.

Associations between sexual activities, problems, concerns, and satisfaction and enjoyment of life are presented in Table 2. After adjusting for sociodemographic and health-related covariates, men and women who reported any sexual activity in the past year had significantly higher mean enjoyment of life scores compared with those who were not sexually active (men: 9.75 ± 0.04 vs 9.44 ± 0.07 [$P < .001$]; women: 9.86 ± 0.04 vs 9.67 ± 0.05 [$P = .003$]). Among sexually active men, frequent (≥ 2 times a month) sexual intercourse (vaginal, anal, or oral) and frequent kissing, petting, or fondling were associated with greater enjoyment of life ($P < .001$ for both). In sexually active women, frequent kissing, petting, or fondling was also associated with greater enjoyment of life ($P < .001$), but frequent sexual intercourse was not ($P = .101$). Frequent (≥ 2 times a month) masturbation was not associated with enjoyment of life in either men or women ($P > .70$).

Among men, difficulty having and maintaining an erection was associated with poorer enjoyment of life ($P < .001$). In both men and women, difficulty achieving orgasm was associated with less enjoyment of life ($P < .001$ in both).

In men, concerns about one's sex life were consistently associated with poorer enjoyment of life, with lower mean enjoyment of life scores in those who were concerned about their level of sexual desire ($P < .001$), frequency of sexual activity ($P = .004$), ability to have an erection ($P < .001$), and orgasmic experience ($P < .001$). These associations were less consistent in women, with significantly poorer enjoyment of life reported by those concerned about the frequency of sexual activity ($P = .001$) and

Table 1. Sample characteristics

Characteristic	Men (n = 3,045)	Women (n = 3,824)
Age, y, mean \pm SD	64.43 \pm 9.78	65.33 \pm 10.08
Partner status, %		
Married/cohabiting	73.8	60.1
Separated/divorced	11.1	15.5
Widowed	6.7	18.8
Single/never married	8.4	5.6
Ethnicity, %		
White	94.0	96.0
Nonwhite	6.0	4.0
Wealth quintile, %		
1 (poorest)	17.0	20.1
2	19.1	20.5
3	20.0	21.3
4	22.1	19.6
5 (richest)	21.7	18.6
Limiting long-standing illness, %		
Yes	31.4	35.9
No	68.6	64.1
Smoking status, %		
Smoker	14.3	13.4
Nonsmoker	85.7	86.6
Alcohol intake, %*		
Never/rarely	15.9	30.5
Regularly	41.5	43.3
Frequently	42.6	26.2
Depressive symptoms (0–8), mean \pm SD	1.12 \pm 1.78	1.55 \pm 1.99
Enjoyment of life (0–15), mean \pm SD	9.63 \pm 2.01	9.72 \pm 1.91

All values are weighted for sampling probabilities and differential nonresponse.

*Never/rarely: never to once or twice a year; regularly: once every couple of months to twice a week; frequently: 3 days a week to almost every day.

ability to become sexually aroused ($P = .018$), but no association observed between enjoyment of life and level of sexual desire or orgasmic experience ($P > .10$ for both).

In both men ($P < .001$) and women ($P = .001$), feeling emotionally close to one's partner during sex was associated with greater enjoyment of life. Satisfaction with one's overall sex life was associated with greater enjoyment of life in men ($P < .001$), but this association was not significant in women ($P = .132$).

DISCUSSION

The present study has shown that several domains of sexual activity and functioning are associated with well-being, specifically enjoyment of life, in a large population-based sample of older English adults. Men and women who reported any sexual activity in the last year reported greater enjoyment of life compared with those who were not sexually active. Moreover,

among those who were sexually active, a greater frequency of kissing, petting, and fondling was associated with greater enjoyment of life in both sexes and greater frequency of sexual intercourse in men only. Feeling emotionally close to one's partner during intercourse was also associated with greater life enjoyment. Those who experienced sexual problems or had concerns about their sex life reported lower levels of life enjoyment. Men who reported being satisfied with their overall sex life reported greater enjoyment of life, but there was no significant association between sexual satisfaction and enjoyment of life in women.

These interesting findings support the hypothesis that “positive sexual activity” is associated with well-being. Several mechanisms may explain this novel association. First, sexual activity has been shown to be associated with better health,^{18,19} and better health is associated with greater enjoyment of life.³⁹ Second, during sexual activity or at the time sexual intercourse is at its peak, there is a release of endorphins, which generates a happy or blissful feeling after sex.⁴⁰ Moreover, those who engage in sexual intercourse with their partner are likely to share a closer relationship,⁴¹ and indeed closeness to one's partner has been shown to be associated with well-being per se.³¹ This is supported by the present finding that feeling emotionally close to one's partner during intercourse was associated with greater life enjoyment. Finally, sexual intercourse can be seen as a form of physical activity that may yield similar physical and psychological benefits as any activity, and thus may yield similar physical and psychological benefits.⁴² Further research in the foregoing areas is needed to understand what exactly is driving the observed associations between sexual activity, function, and concerns and enjoyment of life, most likely a combination of factors.

Importantly, older adults' concerns about their sex lives were found to be negatively associated with life enjoyment. This is likely related to the absence of the benefits of an active and problem-free sex life discussed earlier. The management of sexual health concerns might be more challenging for older adults than for younger adults, due to the common misconception that individuals lose interest in sexual intercourse and the capacity to engage in sexual activity,^{26,43,44} along with the inability or reluctance of medical professionals to proactively address such issues with older adults.⁴⁵ Given the high prevalence of sexual activity and reported levels of sexual health concerns in our present study sample and others,²⁶ there is a clear need to support older adults in maintaining a healthy sex life irrespective of the effects on well-being. It can be speculated that without an adequate coping system, such problems and concerns with one's sex life may manifest as mental health complications, such as depression and anxiety; however, further research is needed to test this hypothesis.

Although our data show an overall pattern for an association between a “positive sex life” and greater life enjoyment in both sexes, many aspects of sexuality were much more strongly associated with enjoyment of life in men than in women. For

Table 2. Sexual activity, functioning, and concerns and satisfaction in relation to enjoyment of life

	Men					Women				
		Mean ± SEM					Mean ± SEM			
Parameter	Yes, %*	Yes	No	F	P	Yes, %*	Yes	No	F	P
Sexual activity										
Any sexual activity in the past year	76.9	9.75 ± 0.04	9.44 ± 0.07	13.08	<.001	57.8	9.86 ± 0.04	9.67 ± 0.05	8.79	.003
Frequent sexual intercourse [†]	45.9	9.97 ± 0.05	9.68 ± 0.05	16.35	<.001	49.3	10.09 ± 0.05	9.97 ± 0.05	2.70	.101
Frequent kissing, petting, or fondling [†]	64.3	9.99 ± 0.04	9.52 ± 0.06	43.68	<.001	67.1	10.13 ± 0.04	9.81 ± 0.06	16.68	<.001
Frequent masturbation [†]	42.0	9.84 ± 0.05	9.82 ± 0.05	0.14	.709	15.0	10.02 ± 0.09	10.04 ± 0.04	0.06	.812
Sexual function										
Erectile difficulties	42.7	9.46 ± 0.05	9.84 ± 0.04	26.47	<.001	—	—	—	—	—
Difficulty becoming sexually aroused [‡]	—	—	—	—	—	33.1	10.00 ± 0.07	10.08 ± 0.05	0.88	.348
Difficulty achieving orgasm [‡]	17.5	9.44 ± 0.09	9.93 ± 0.04	24.62	<.001	26.4	9.88 ± 0.08	10.14 ± 0.05	8.28	.004
Sexual health concerns										
Concerned about...										
Level of sexual desire	13.5	9.23 ± 0.08	9.76 ± 0.03	33.40	<.001	7.6	9.72 ± 0.10	9.78 ± 0.03	0.26	.614
Frequency of sexual activities [†]	13.7	9.58 ± 0.09	9.86 ± 0.04	8.19	.004	8.2	9.62 ± 0.13	10.07 ± 0.04	11.30	.001
Ability to have an erection	14.6	9.38 ± 0.09	9.73 ± 0.03	14.80	<.001	—	—	—	—	—
Ability to become sexually aroused [‡]	—	—	—	—	—	8.2	9.73 ± 0.14	10.09 ± 0.04	5.59	.018
Orgasmic experience [‡]	12.1	9.44 ± 0.11	9.90 ± 0.04	16.28	<.001	6.7	9.87 ± 0.15	10.09 ± 0.04	1.96	.162
Sexual satisfaction										
Emotionally close to partner [§]	94.4	10.08 ± 0.04	8.71 ± 0.16	68.32	<.001	92.0	10.18 ± 0.04	9.68 ± 0.15	10.51	.001
Satisfied with overall sex life [§]	78.6	10.10 ± 0.04	9.60 ± 0.09	25.60	<.001	87.3	10.16 ± 0.04	9.97 ± 0.12	2.27	.132

All analyses are weighted for sampling probabilities and differential nonresponse. Means and *F* values are adjusted for age, wealth quintile, limiting long-standing illness, smoking status, alcohol intake, and depressive symptoms.

SEM = standard error of the mean.

*Valid percentages.

[†]In participants reporting any sexual activity in the past year.

[‡]In participants reporting any sexual activity in the past month.

[§]In participants reporting any sexual activity with a partner in the past 3 months.

example, greater frequency of petting, fondling, and kissing was associated with greater enjoyment of life in both sexes, but greater frequency of intercourse was associated with enjoyment of life in men only. These findings indicate potential sex differences in the relative importance of different sexual activities. It appears that sexual intercourse may be more important for men than for women in terms of promoting well-being, whereas women's enjoyment is more closely linked to other sexual activities. Although sexual intercourse tends to be the most commonly assessed sexual activity, recent data show that physical tenderness (ie, fondling or kissing) comprises a considerable part of older adults' sexual activity, particularly in women.⁴⁶ Thus, future studies should consider including nonintercourse measures of sexual activity to gain a more nuanced insight into the prevalence and importance of sexual activity in older adults.

Satisfaction with one's overall sex life was associated with greater enjoyment of life in men, but the association was not significant in women. A previous descriptive study found that lack of interest in sex was more prevalent in elderly women compared with elderly men.⁴⁷ This could be due to a decline in levels of sex hormones, which can influence sexuality after menopause.⁴⁸ Another factor that might influence female sexual behavior in later life is longevity; on average, women live longer than men, and many may find it difficult to find a partner after the loss of a spouse or partner. The reason for this difficulty has not been systematically evaluated but appears to be multidimensional, with biological, cultural, and psychological factors playing roles.⁴⁹

Aging is associated with a range of biological and physiological changes to the human body, including a loss of skeletal muscle mass,⁵⁰ a decline in circulating levels of the principal androgen and sex hormone testosterone,⁵¹ as well as a reduction in peak bone mass.⁵² Such changes are likely to contribute to the age-related increase in chronic health conditions, such as cardiometabolic disease.⁵³ The aging process likely increases the prevalence of sexual problems⁵⁴ and may reduce the frequency of sexual activity. It is possible that men and women who are sexually active have more positive aging parameters and fewer chronic conditions, and thus tend to enjoy life more. Indeed, a recent study across 4 countries showed that higher successful aging scores were consistently related to a lower reduction in sexual interest/enjoyment among both men and women.⁵⁵ However, given that we controlled for age and limiting long-standing illness in the present analysis, it is unlikely that these factors are driving our present findings.

Strength of the present study include its large population-based sample of older English adults and adjustment for a range of sociodemographic and health-related confounders. However, our findings must be interpreted in light of several limitations. The cross-sectional study design precludes casual inferences; for example, it is not clear whether sexual activity allows one to enjoy life more or whether those who enjoy life more are more likely to be sexually active. It is possible that the

relationship is bidirectional. A further limitation is that sexual information was self-reported, and respondents might not have answered questions honestly for fear of being judged. However, it was made clear to participants that the survey responses would remain anonymous, and each survey was returned in a sealed envelope. Moreover, there are currently few other options besides self-reporting questionnaires for measuring the variables investigated in this study. Finally, we were unable to take into account cultural norms which could influence reasons to engage in sexual activity, and thus our findings might not be generalizable to other countries with populations having differing attitudes toward sex in later life.

CONCLUSION

In this large representative sample of older English adults, sexual activity and feeling emotionally close to one's partner during sexual activity were associated with greater enjoyment of life in both men and women, although an association between overall satisfaction with sex life and enjoyment of life was only evident in men. Men who experienced sexual problems or had concerns about their sex life consistently reported lower levels of life enjoyment, and some associations were also observed in women. These findings have important implications for health practitioners and caregivers, highlighting the need to acknowledge that older adults are not asexual, and that a frequent and problem-free sex life in this population is related to improved well-being. Information on and encouragement to try new sexual positions and explore different types of sexual activity is not regularly given to aging populations. Engaging in discussions regarding sexuality in later life could help redress perceived norms and expectations about sexual activity in older people and help them live more fulfilling lives. Our present findings and those of others⁵⁴ suggest that it may be beneficial for physicians to routinely query geriatric patients about their sexual activity and to offer help for sexual difficulties.

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